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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,906	08/22/2005	Reinhard Glatthaar	LINDE-0625	7330

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EXAMINER	
DOERRLER, WILLIAM CHARLES	
ART UNIT	PAPER NUMBER
3744	

MAIL DATE	DELIVERY MODE
02/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/510,906	GLATTHAAR ET AL.	
	Examiner	Art Unit	
	William C. Doerrler	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2-4-2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,2 and 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockett et al (5,339,648) in view of Agrawal et al '744.

Lockett et al discloses applicants' basic inventive concept, an air separation system with a high pressure column which feeds a low pressure column with a central partitioned section (with each partitioned section open to the higher and lower section

with the fluid inlet in one partitioned section and the argon rich stream leaving from the other partitioned section), substantially as claimed with the exception of specifying an argon concentration for the argon rich stream leaving the partitioned section between 15 and 50%. While this is considered a matter of design choice for an ordinary practitioner in the art, Line 49 of column 7 of Agrawal et al states that an oxygen concentration between 3 and 60% can be removed from a partitioned air separation column. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of Agrawal et al '744 to remove an argon enriched stream from the partitioned column having an argon concentration between 15 and 50% to provide an efficient separation system. Line 28 of column 7 of Agrawal states that there is 5-15% argon in the bottom section. Line 45 of column 7 of Agrawal et al states that there is up to 10% oxygen in the stream removed from the second portion of the central area. In regard to claim 9, line 42 of column 9 which states that there are 20-200 stages used for separation. In regard to claim 8, Agrawal et al state that argon product stream 553 may contain nitrogen and oxygen. However, deriving products with desired purity is considered well within the scope of the ordinary practitioner and considered obvious. It is noted that applicants' give no new structure to their argon column, so there is no disclosure of any structure that would not be known to an ordinary practitioner in the art presented with the Agrawal patent. By modifying the argon column in known ways, one of ordinary skill in the art could derive argon with less than 10ppm oxygen, if that is what is desired by the consumer. In regard to claims 14-16, the concentrations of the various

streams are seen as matters of design choice for an ordinary practitioner in the art to maximize the desired yield as efficiently as possible.

Claims 1-3 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al (5,970,742) in view of Agrawal et al '744.

Agrawal et al '742 discloses applicants' basic inventive concept, an air separation system with two columns with one having an upper, lower and middle section with a second column in parallel with the middle section with both liquid and vapor connections to both the upper and lower sections (see figures 5 and 12), substantially as claimed with the exception of specifying an argon concentration for the argon rich stream leaving the partitioned section between 15 and 50%. While this is considered a matter of design choice for an ordinary practitioner in the art, Line 49 of column 7 of Agrawal et al '742 states that an oxygen concentration between 3 and 60% can be removed from a partitioned air separation column. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of Agrawal et al '744 to remove an argon enriched stream from the partitioned column having an argon concentration between 15 and 50% to provide an efficient separation system. Line 28 of column 7 of Agrawal '744 states that there is 5-15% argon in the bottom section. Line 45 of column 7 of Agrawal et al '744 states that there is up to 10% oxygen in the stream removed from the second portion of the central area. In regard to claim 9, line 42 of column 9 which states that there are 20-200 stages used for separation. In regard to claim 8, Agrawal et al state that argon product stream 553 may contain nitrogen and oxygen. However, deriving products with desired purity is considered well within the

scope of the ordinary practitioner and considered obvious. It is noted that applicants' give no new structure to their argon column, so there is no disclosure of any structure that would not be known to an ordinary practitioner in the art presented with the Agrawal patent. By modifying the argon column in known ways, one of ordinary skill in the art could derive argon with less than 10ppm oxygen, if that is what is desired by the consumer.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Doerrler whose telephone number is (571) 272-4807. The examiner can normally be reached on Monday-Friday 6:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

William C Doerrler
Primary Examiner
Art Unit 3744

WCD

/William C Doerrler/
Primary Examiner, Art Unit 3744